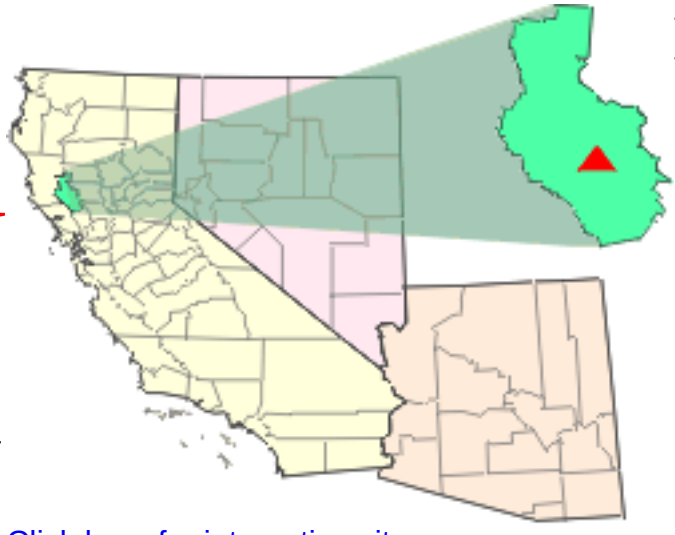
SULPHUR BANK MERCURY MINE

CALIFORNIA

EPA ID#
CAD980893275



Click here for interactive site area map

Click here for **live video** of the site

EPA Region 9

City: Clear Lake
County: Lake
Other Names:

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SITE DESCRIPTION AND HISTORY

Description: The 120-acre Sulphur Bank Mercury Mine site initially was mined for sulfur from 1865 to 1871. Mercury ore was mined intermittently by underground methods from 1873 to 1905. The site periodically was opened for pit mining from 1915 to 1957. The mine, once one of the largest producers of mercury in California, has been inactive since 1957. Approximately 120 acres of mine tailings and waste rock and an open, unlined mine pit (called the Herman Impoundment) are located on the property. The mine tailings extend into the Oaks Arm of Clear Lake along 1,300 feet of shoreline. Approximately 193,600 cubic yards of waste remain on site. The Herman Impoundment, which is filled with acidic water, covers 23 acres to depth of 90 feet and is located 750 feet upgradient of the lake. The State has found mercury in the tailings and in the biota and bottom sediments in Clear Lake. The levels of mercury in fish from the lake led the State to issue an advisory against eating fish. The Clear Lake Oaks Water District, which provides municipal drinking water for 4,700 people, is recharged by Clear Lake.

Site Responsibility:	**NPL LISTING HISTORY**
This site is being addressed through Federal actions.	**Proposed Date:** 06/24/88 **Final Date:** 08/30/90 **Deleted Date:**

THREATS AND CONTAMINANTS

Sediments from Clear Lake, soil, surface water, and fish are contaminated with mercury and arsenic. Mercury bioaccumulation in excess of the Federally recommended limit for human consumption has been documented in Clear Lake fish; one of the major health threats associated with the site is eating mercury contaminated fish. In addition, people who accidentally ingest or come into direct contact with contaminated surface water and sediments may suffer adverse health effects. Ingestion and inhalation of contaminated soil also are primary concerns. If contaminants leach into the nearby wetland, wildlife in or around the water may be harmed.

CLEANUP APPROACH

EPA is addressing the site in three phases: emergency actions to prevent imminent harm to the lake and nearby residents, and two two long-term remedial phases, called "operable units". One operable unit includes cleanup of the Herman Impoundment and surrounding mine waste piles; the second operable unit will address contaminated sediments in Clear Lake and resulting mercury accumulation in the biota.

Response Action Status

Erosion control emergency response. In 1992, EPA cut back the mine waste piles by the shore of the lake to reduce the slope and reseeded the waste rock piles to reduce erosion of mine waste into Clear Lake. In 1996, EPA raised the Herman Impoundment dam was as a temporary flood control measure and, in 1999, constructed permanent storm-water controls.

Soil removal from residential yards. In 1997, EPA removed xx cubic yards of mercury- and arsenic-contaminated soil from the yards of nn residences at the Elem colony of Pomo indians, which is adjacent to the waste rock piles. Blood tests of residents of the colony showed no levels of mercury elevated enough to indicate a health concern.

Well closure emergency response. Previous owners of the mine had drilled some exploratory geo-thermal wells near the Herman Impoundment. EPA was concerned that, if the owners had not properly abandonned these wells when they were no longer useful, they might be subject to a violent release of geo-thermal gases. As a result, EPA conducted an emergency action in late 2000 and early 2001 to investigate and close these wells as necessary.

Herman Impoundment and Waste Piles investigation. In 1990, the EPA began an investigation into the nature and extent of contamination at the impoundment and waste piles. EPA completed a remedial investigation and feasibility study (RI/FS) and issued a proposed cleanup plan in 1994. Following the plan's release, the seven-year drought ended with severe flooding, revealing a major acid mine drainage problem affecting Clear Lake. EPA then re-opened the RI/FS to identify sources of mercury-rich acid drainage into Clear Lake and to identify appropriate control strategies. In late 2000, the Department of Energy completed an aerial survey of geological resistivity at the site to help define pathways of groundwater movement. Then, in early 2001, EPA's contractors completed a hydro-geological study of groundwater movement through the site. The final remedial investigation will incorporate the results of these studies.

Lake Sediments investigation. In 1991, EPA began an investigation into the nature and extent of contamination in the lake sediments, but put this study on hold in order to focus on the source of the contamination, the mine site. Meanwhile, other entities, notably the University of California - Davis, have continued to study the processes affecting bioavailability of mercury in Clear Lake. In 2000, EPA convened a conference of national experts on mercury contamination. The findings of these studies and conferences will inform the Record of Decision for the Lake Sediments operable unit.

Surface Water Diversion. In 1999-2000, EPA constructed surface water diversions on the mine site to prevent contaminated sediments and water from flowing into Clear Lake. The diversion work included the construction of a 4,000' pipeline which allows stormwater from surrounding hills to flow through the site without being contaminated by mine wastes.

Site Facts: The Sulphur Bank Mercury Mine site is at the end of the Oaks Arm on the southeastern end of Clear Lake. The Superfund site encompasses the property of the Elem Colony of Pomo indians and approximately 70 houses are located within 3 miles of the site. A former freshwater wetland is 900 feet to the east of the mine. A critical habitat for three endangered wildlife species, the Peregrine Falcon, Southern Bald Eagle, and Yellow-Billed Cuckoo, is less than 1/4 mile from the site.

ENVIRONMENTAL PROGRESS

EPA has completed erosion control measures to stabilize the shoreline waste pile and temporary improvements to Herman Impoundment Dam to reduce overflows. EPA has also removed contaminated soil from residential yards in the Elem colony of Pomo indians adjacent to the waste rock pile.

POTENTIALLY RESPONSIBLE PARTIES

Potentially responsible parties (PRPs) refers to companies that are potentially responsible for generating, transporting, or disposing of the hazardous waste found at the site.

Online information about the PRPs for the site is not yet available.

SITE DOCUMENTS AND REPORTS

Administrative Records: Online versions not yet available

Records of Decision: Online versions not yet available

Technical Documents:

COMMUNITY INVOLVEMENT

Public Meetings: None currently scheduled.

Newsletters and Fact Sheets: 1) **Oct. 99 - Interim Construction Work Begins At Sulphur Bank Mercury Mine Superfund Site**
2) **Nov. 2000 - EPA is Closing Geothermal Wells near the Herman Pit**
3) **Nov. 2000 - U.S. EPA Invites the Elem Nation to an Open House to Talk About the Sulphur Bank Mercury Mine**

SITE REPOSITORIES/LIBRARY SOURCES

The public information repositories for the site are at the following locations:

Lake County Library
1425 North High Street
Lakeport, CA 95453

Redbud Library
4700 Golf Avenue
Clearlake, CA 95422

The most complete collection of documents is the official EPA site file, maintained at the following location:

Superfund Records Center
Mail Stop SFD-7C
95 Hawthorne Street, Room 403
San Francisco, CA 94105
(415) 536-2000

Enter main lobby of 75 Hawthorne street, go to 4th floor of South Wing Annex.

CONTACTS

EPA SITE MANAGER:	Richard Sugarek
ADDRESS:	
PHONE NUMBER:	(415) 972-3151
E-MAIL ADDRESS:	sugarek.richard@epa.gov

EPA COMMUNITY INVOLVEMENT COORDINATOR:	Wenona Wilson
ADDRESS:	
PHONE NUMBER:	1-800-231-3075
E-MAIL ADDRESS:	wilson.wenona@epa.gov

PUBLIC INFORMATION CENTER:	(415) 947-8701
E-MAIL ADDRESS:	r9.info@epamail.epa.gov

STATE CONTACT:

ADDRESS:

PHONE NUMBER:

PRP CONTACT:

ADDRESS:

PHONE NUMBER:

COMMUNITY CONTACT:

ADDRESS:

PHONE NUMBER:

After Hours (Emergency Response)

State Environmental Protection Agency	**US Environmental Protection Agency**
(800) 852-7550	**(800) 424-8802**

MISCELLANEOUS INFORMATION

STATE: CA

CONGRESSIONAL DISTRICT: 01

EPA ORGANIZATION: SFD-7-2